

REMARKS/ARGUMENTS

Claims 1-22 are pending in the present application. Reconsideration in view of the following Remarks is respectfully requested.

The Office Action rejects claims 1-22 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,917,460 to Kodama (hereinafter "Kodama") in view of U.S. Patent No. 6,795,241 to Holzbach (hereinafter "Holzbach"). This rejection is respectfully traversed.

Applicants respectfully submit that the Office Action has failed to establish a *prima facie* case of obviousness, as required under 35 U.S.C. § 103.

Independent claim 1 recites, *inter alia*, an apparatus for displaying a three-dimensional image, which synthesizes an aspectogram comprising at least three two-dimensional microimages of a scene, comprising a compensator for adjusting a viewing zone of the three-dimensional image that is synthesized from the at least three two-dimensional microimages and/or compensating distortion of said three-dimensional image by manipulating the aspectogram in accordance with a signal input from the detector.

Independent claim 4 recites, *inter alia*, an aspectogram comprising at least three two-dimensional microimages of a scene, and a viewing adjust engine for adjusting a viewing zone of the three-dimensional image by moving the at least three microimages in accordance with a signal input from the head position detector.

Independent claim 7 recites, *inter alia*, an aspectogram comprising at least three two-dimensional microimages of a scene, and a device for regenerating the at least three microimages

of the scene in accordance with a signal input from the head position detector to compensate distortion of the three-dimensional image.

Independent claim 9 recites, *inter alia*, a method for displaying a three-dimensional image of a scene, which is generated by synthesizing an aspectogram comprising at least three two-dimensional microimages of the scene and regenerating the at least three microimages as the three-dimensional image, comprising adjusting a viewing zone of the three-dimensional image and/or compensating distortion of the three-dimensional image by manipulating the at least three microimages, in accordance with the calculated position of the observer head.

Independent claim 12 recites, *inter alia*, a system for displaying a three-dimensional image of a scene that is generated via an aspectogram comprising at least three two-dimensional images of the scene, comprising a compensator that manipulates the at least three two-dimensional images of the scene in accordance with the position signal.

Independent claim 18 recites, *inter alia*, a method of manipulating a three-dimensional image of a scene that is generated via an aspectogram comprising at least three two-dimensional images of the scene, comprising manipulating the at least three two-dimensional images of the scene based on the determined position of the observer.

Kodama fails to teach or suggest these features. Kodama discloses a head mounted image display system which utilizes two LCD displays that are used to project images directly onto the left and right retinas of a user in order to create a virtual image of scene. In contrast, the present invention utilizes an Integral Photography method in which an aspectogram

comprising at least three two-dimensional microimages is used to generate a three-dimensional image, and in which the microimages are manipulated in response to a detected movement of an observer.

Further, Holzbach fails to remedy the deficiencies noted above in Kodoma. Although Holzbach discloses an Integral Photography method for generating a three-dimensional scene, there is no teaching or suggestion as to manipulation of the microimages in response to a detected movement of the observer.

In reply to the arguments filed by Applicants on September 29, 2005, the Examiner asserts that she has provided full motivation in detail for combining the Kodama and Holzbach references. The Examiner asserts that “the motivation for doing so is to present 3D information to an individual or group of observers using computer mediated 3D communications in accordance with the teachings of the Holzbach invention without requiring each observer to wear special goggles or glasses (as required in Kodama) as suggested by Holzbach at col. 2, lines 44-63; and also to allow an observer to view a display from any distance without observing the anamorphic distortions, which are inherent in horizontal parallax only displays as suggested by Holzbach at col. 6, lines 64-66.” The Examiner then concludes that “it would have been obvious to combine Holzbach with Kodama to obtain the invention as specified in claim 1.”

One of the criteria for establishing a *prima facie* case of obviousness is that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally

available to one of ordinary skill in the art, to modify the reference or combine the reference teachings (see MPEP § 2143).

As described in the specification, an aspectogram generates a three-dimensional image in space from multiple two-dimensional microimages. Further, the claimed invention manipulates the two-dimensional microimages in response to detected movement of an observer. The Office Action utilizes Kodama as a primary reference in support of the 35 U.S.C. § 103(a) rejection. Kodama teaches the use of two LCD displays that are mounted onto an observer's head, and that are used to project images directly onto the left and right retinas of a user in order to create a virtual image of a scene. This is a completely different mechanism for generating a three-dimensional virtual image than that taught and claimed in the present invention.

The Office Action then asserts that the Holzbach reference, which is directed at an Integral Photography method for generating a three-dimensional scene, provides motivation for combining the disclosed Integral Photography method with the Kodama system. Holzbach teaches the use of a completely different physical mechanism for generating a three-dimensional scene (Integral Photography) than that taught by Kodama (projecting images directly onto retinas). Applicants fail to understand how one could find any motivation in Holzbach to combine the system taught in Holzbach with the head-mounted LCD-based image display system taught in Kodama. Applicants have reviewed the Holzbach and Kodama references extensively, and cannot find any teachings as to how the lenticular lens sheets used in Holzbach

could be incorporated in the head-mounted image display system of Kodama without completely changing the principle of operation of Kodama's device.

In fact, the MPEP address just this situation. See MPEP § 2143.01, which states that if a "proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." *In Re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Applicants respectfully submit that combining the Integral Photography method taught in Holzbach with the head-mounted display system of Kodama would completely change the principle of operation of the Kodama system. Put another way, utilizing the lenticular lens sheets of Holzbach in place of the LCD displays in Kodama would not only change the principle of operation of the Kodama system, but would in fact render the Kodama display system inoperable. This is because the Kodama system relies on images being projected directly onto the left and right retinas of a user. The lenticular lens sheets of Holzbach generate a three-dimensional scene in space by synthesizing multiple two-dimensional images. Thus, as indicated in MPEP § 2143.02, the teachings of the Kodama and Holzbach references are not sufficient to render the claims *prima facie* obvious.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that Kodama and Holzbach fail to render obvious the subject matter of claims 1, 4, 7, 9, 12 and 18. Claims 2 and 3 depend from claim 1, claims 5 and 6 depend from claim 4, claim 8 depends from claim 7, claims 10 and 11 depend from claim 9, claims 13-17 depend from claim 12 and claims

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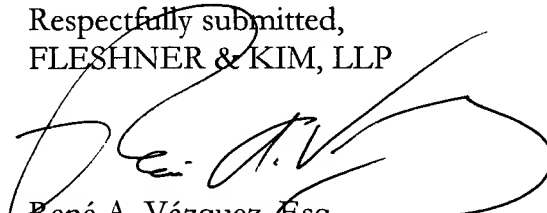
19-22 depend from claim 18. Accordingly, these claims are also allowable for at least the reasons set forth above, as well as for the additional features they recite.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **René A. Vázquez, Esq.**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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